ABSTRACT

Objective: To assess the association between serum uric acid levels on birth weight in women with hypertension in pregnancy. To assess adverse maternal and fetal outcome at various uric acid levels and to determine the level of uric acid at which increasing maternal/fetal complications happens during pregnancy.

Study design: Using a retrospective cohort from the electronic labor room database, and individual chart checking from the medical records which exists for all women delivering in our institution during the study period from January 2015- December 2016, association between serum uric acid levels and birth weight, fetal and maternal complications were evaluated.

Results: Patients who had high uric acid show greater prevalence of FGR (16.6%) in our study. Babies who had most neonatal complications, had a mean uric acid level of 5.52mg/dl affecting in birth weight(BW) to be 1523grams (95%CI 1379-1666 grams). However those with no complications in our study have mean uric acid values 4.81mg/dl and birth weight 2566grams (95%CI 2523-2610 grams).The mean level of uric acid at which maternal complications occurred was 5.46mg/dl (+/- 1.5SD) which is statistically significant at 5% level when compared to 4.50mg/dl (+/- 1.2SD) in those who had no maternal complications. The occurrence of maternal complications in both study groups is statistically significant, 60% in high UA group and 28.43% in normal UA group.

Conclusion: Hyperuricemia is an important predictor in gestational hypertension that may indicate higher risks of adverse neonatal outcomes in the form of FGR.

In those with pre-eclampsia, monitoring serial uric acid level may help to predict those who will develop complications. These complications can be best avoided by early termination of pregnancy after administration of corticosteroids with the serum uric acid level >=5.5mg/dl as per our study.